



Review of Oil Spill Risk and Comparison to Funding Mechanism

Proposed Final Report

Joint Legislative Audit & Review Committee
January 7, 2009

Elisabeth Donner and John Woolley
JLARC Staff



Statutory Directive Guides Oil Spill Program Activities

“The legislature finds that **prevention** is the best method to protect the unique and special marine environments in this state...”

And

“...that the primary objective of the state is to achieve a **zero spills strategy** to prevent any oil or hazardous substances from entering waters of the state.”

RCW 90.56.005(2)

B
A
C
K
G
R
O
U
N
D

Report Looks at Three Key Oil Spill Questions



B
A
C
K
G
R
O
U
N
D

1. What are the sources of oil spill risk into Washington's waters?
 - *Spills occur across the state from many different sources.*
2. Do the sources of revenue (funding for oil spill activities) align with the sources of risk?
 - *No.*
3. Are there alternative funding methods?
 - *Other states have broader/different tax bases.*
 - *Aligning funding with risk faces practical hurdles.*

Consultants Identified 23 Risk Sources: Modes of Transportation & Activities



S
O
U
R
C
E
S
O
F
O
I
L
S
P
I
L
L
R
I
S
K

- | | | | |
|--------------------------|--|-----------------------|---|
| <p>Facilities</p> | <ul style="list-style-type: none"> Airport Facility-Milling Facility-Other Gas Station Oil Terminal Power Utility Refinery Residential | <p>Vessels</p> | <ul style="list-style-type: none"> Ferry Fishing Vessel Non-Tank Vessel Passenger Vessel Pleasure Craft Tank Barge Tank Ship Tow/Tug Boat |
| | <p>Mobile</p> <ul style="list-style-type: none"> Aircraft Railroad Tanker Truck Vehicle-Other | | <p>Other</p> <ul style="list-style-type: none"> Pipeline Military Unknown |

Relative Oil Spill Risk = Probability × Impact: Calculating Relative Risk



S
O
U
R
C
E
S
O
F
O
I
L
S
P
I
L
L
R
I
S
K

- ➔ Multiply per-gallon impact scores by probability
- ➔ Final risk score: provides indicator for *relative* measure of oil spill risk for each source category and geographic location

Report Pages 9-11,
Appendix 7

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009

5

Analysis Uses Four Approaches for Estimating Relative Risk



S
O
U
R
C
E
S
O
F
O
I
L
S
P
I
L
L
R
I
S
K

- **Approach #1:** based on actual spill history into Washington waters from 1995 through 2007.
- **Approach #2:** incorporates into historic data range of *potential* spill volumes.
- **Approach #3:** incorporates into historic data *known and projected changes* in regulations, industry operation, and traffic for the year 2015.
- **Approach #4:** incorporates into *potential* spill volumes *known and projected changes* in regulations, industry operations, and traffic for year 2015.

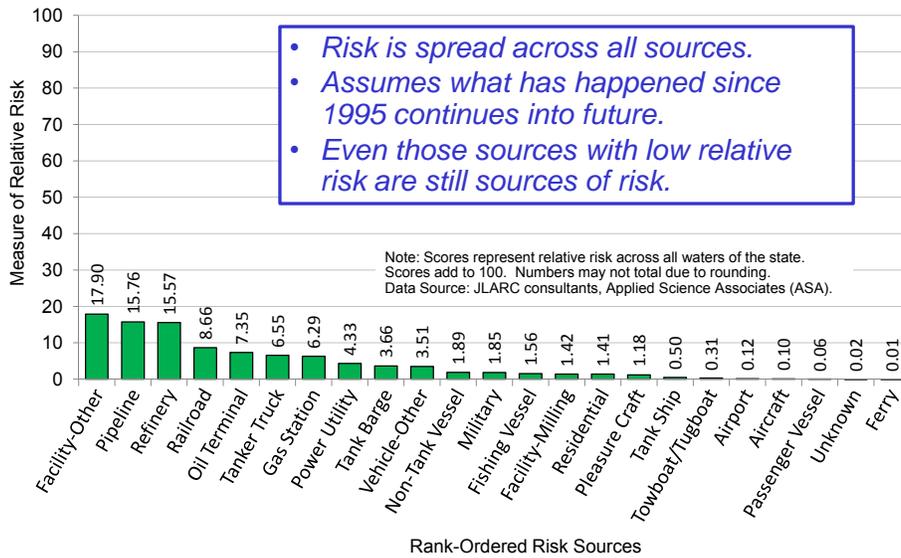
Report Page 13

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009

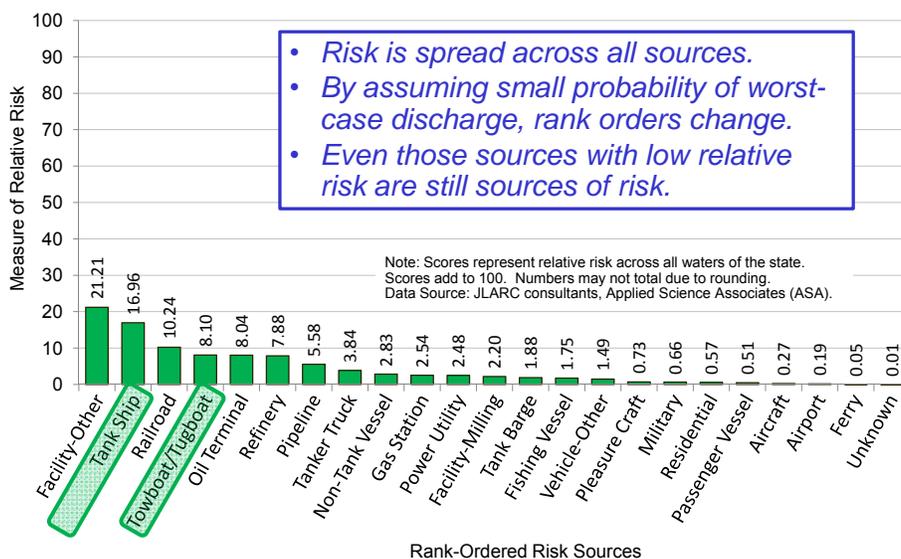
6

Approach #1 – Historic Spill Data



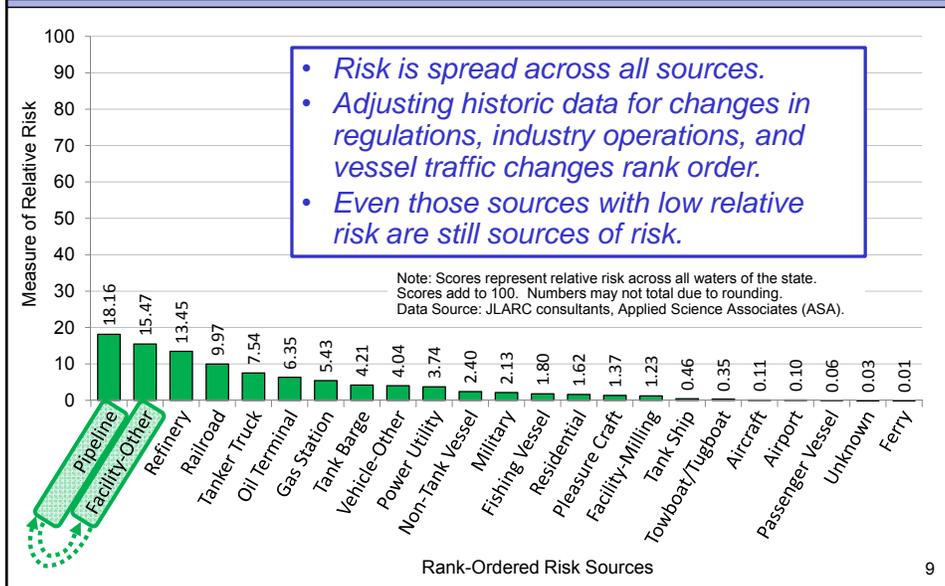
7

Approach #2 – Potential Spillage



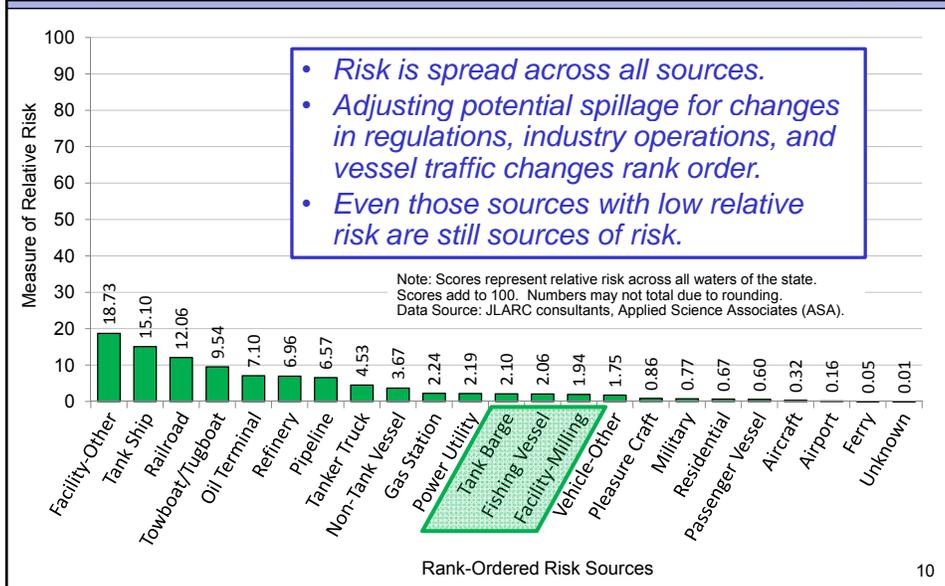
8

Approach #3 – Projected Changes in 2015 Based on Historic Data



9

Approach #4 – Projected Changes in 2015 Based on Potential Spillage



10

No One Approach is “Better”



S
O
U
R
C
E
S
O
F
O
I
L
S
P
I
L
L
R
I
S
K

- Multiple ways of analyzing risk: this study uses four.
- Each is different—one approach is not “better” than another.
- Fundamentally, all approaches attempt to predict the future, which is uncertain.
- Risk will change over time—one large spill might change ranking.

Do Oil Spill Taxes Directly Align With the Sources of Risk?



A
L
I
G
N
M
E
N
T

Sources of Risk	Two Major Sources of Revenue: Oil Spill Taxes
<p>Based on <i>transportation mode or activity</i> such as:</p> <p>Pipeline</p> <p>Tank Barge</p> <p>Manufacturing Facility</p>	<p>Based on <i>ownership</i> of oil when it is <i>first</i> received</p> <p><i>in a storage tank at a marine terminal,</i></p> <p>from a waterborne vessel or barge</p>

Oil Spill Taxes Not Directly Aligned With Risk Sources



ALIGNMENT

Sources of Risk

Two Major Sources of Revenue: Oil Spill Taxes

Transportation Mode or Activity \neq Ownership of oil in storage tank

Three Additional Considerations When Funding Oil Spill Programs



FUNDING CONSIDERATIONS

1. Attributes of a high-quality tax structure
 - *Equitable, inexpensive and efficient to administer, with minimal impacts on economic decision making*
2. Impacts of U.S. Constitution on Washington tax law
 - *U.S. Constitution's Interstate Commerce Clause*
3. Practices of other coastal states
 - *May not align with risk, but provide alternatives:*
 - ⇒ *Oregon taxes each vessel trip*
 - ⇒ *New Hampshire includes pipelines*

Summary of Answers to Three Key Questions



P
R
E
S
E
N
T
A
T
I
O
N

S
U
M
M
A
R
Y

1. Sources and risks?
 - ***Spills occur across the state from many different sources.***
2. Alignment with funding?
 - ***Current sources of oil spill revenues do not align with sources of risk.***
3. Alternative funding sources?
 - ***While not necessarily risk based, some other states have broader or different tax bases.***

Report Pages 33-34

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009 15

Consider Practical Issues if Goal is Aligning Risk With Funding



P
R
E
S
E
N
T
A
T
I
O
N

S
U
M
M
A
R
Y

- Multiple transportation modes and activities across the state associated with oil spill risk
- Risk changes over time
- Develop data system for risk assessment
- Select specific risk assessment approach

Report Pages 34

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009 16

No Recommendations in Report: Agencies Provided Opportunity to Comment



AGENCY
RESPONSES

- OFM and the Department of Revenue had no specific comments.
- The Department of Ecology, the Department of Fish and Wildlife, and the Oil Spill Advisory Council provided detailed comments.

Appendix 2

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009 17

Department of Ecology's Response Addresses Workload and Funding



AGENCY
RESPONSES

- *Ecology states that JLARC identifies sources of risk not regulated by Ecology's Spills Program. If the Legislature wants them regulated, additional funding and authority is required.*
- *Ecology states that the Spills Program needs a fully reliable, equitable, and sustainable funding mechanism.*
- *Ecology states that any new fee should be:*
 - *Proportionate to current program workload;*
 - *Based on industry sectors the Spills Program currently regulates; and*
 - *Administratively efficient and legally sustainable.*

Appendix 2

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009 18

Fish And Wildlife's Response Addresses Methodology and Funding



AGENCY
RESPONSES

- *Department of Fish and Wildlife cautions policy makers against attaching too much accuracy to actual numbers in the report. Near misses are not included in JLARC's data.*
- *The Department points out that: sources of risk are diverse; the presence of oil creates risk; a funding solution based on each exchange of oil and petroleum products might be more practical.*
- *The Department states that the spills program has been instrumental in reducing spill risk; gains will be diminished if programs are reduced due to a lack of funding.*

Appendix 2

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009 19

Oil Spill Advisory Council's Response Addresses Funding and Alignment



AGENCY
RESPONSES

- *Based on indications in the report, the Council states that it would be almost impossible to directly align revenue with percentage of risk posed.*
- *According to the Council, the Legislature should consider:*
 - *Charging a fee or tax related to oil itself or commodity activity, and as close to the well head as possible;*
 - *Eliminating the barrel tax, replace with fee on all bulk transfers of oil products on, over, or within a distance that could drain to waters of state; and*
 - *Ecology's proposed oil handling fee.*

Appendix 2

Review of Oil Spill Risk and Comparison to Funding Mechanism

January 7, 2009 20

Contact Information



Elisabeth Donner 360-786-5190
donner.elisabeth@leg.wa.gov

John Woolley 360-786-5184
woolley.john@leg.wa.gov

www.jlarc.leg.wa.gov